

Remarks:

Reconsideration of the application is requested.

Claims 1-13 & 16-19 remain in the application. Claims 14 & 15 have been canceled to facilitate prosecution of the instant application.

In paragraph 1 on page 2 of the above-identified Office action, the Examiner objected to the specification for introducing new matter. Claims 14 and 15 have been canceled. It is hereby submitted that no new matter is introduced into the instant application.

In item 1 on page 2 of the above-identified Office action, claims 14 & 15 have been rejected under 35 U.S.C. § 112, first paragraph as not being supported in the specification as originally filed.

More specifically, the Examiner states that the specific frequencies of 315 and 915 MHz are not supported by the specification as originally filed.

Claims 14 and 15 have been canceled.

It is accordingly believed that the specification and the claims meet the requirements of 35 U.S.C. § 112, first paragraph. The above noted changes to the claims are provided solely for the purpose of satisfying the requirements of 35 U.S.C. § 112. The changes are not provided for overcoming the prior art.

In item 2 on page 3 of the above-identified Office action, claims 1, 4, 5, and 7 have been rejected as being fully anticipated by Wood, Jr. (U.S. Patent No. 6,104,333) under 35 U.S.C. § 102(e).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, inter alia, a transceiver unit for transmitting an interrogation signal and for receiving access code signals, and having an evaluation unit connected to the transceiver unit, for evaluating received access code signals; a number of access code transmitters for receiving the interrogation signal and for transmitting a respective

specific access code signal in reaction to receiving the interrogation signal;

outputting with the transceiver unit an interrogation signal configured to activate all the access code transmitters **at the same time**; and

transmitting with each of the access code transmitters receiving the interrogation signal a respectively specific access code signal, **substantially simultaneously**; and receiving the access code signals with the transceiver unit **substantially simultaneously**, and separating the access code signals on a basis of specific spread sequences applied to the signals. (Emphasis added).

Wood, Jr. (U.S. Patent No. 6,104,333) discloses an interrogation system where an interrogation device 26 interrogates a backscatter 12. Such systems can be used for product monitoring or also for access controls. The interrogation unit 26 thereby interrogates the transponder by means of spread spectrum signals. The signals can then be reflected by the transponder, backscatter, or the received signal can be evaluated or actively transmitted back (col. 10, lines 1 to 9). Only the discussed transponder transmits its answer back. Thus, the transmission of a responsive answer from multiple transponders will not occur (col. 15, lines 48

to 50). In order to prevent multiple transponders answering simultaneously, the transponders are operated such that they transmit their respective answer signals back **at different points in time**. These points in time can thereby be predetermined or be determined variably by a random number generator (see, starting in col. 17, line 25, to col. 18, line 58).

In Wood, Jr. the interrogation device essentially transmits the spreading sequence. When the signals are reflected through a backscatter, they are also spread. Contrary thereto, a spreading of the interrogation signal does not take place in the invention of the instant application, but instead a simple request signal is transmitted with which the transponders, which receive the signal, transmit their respective answer signal back **at the same time**. It is thus achieved that - when several transponders are in the receiving area - several answer signals are sent at the same time and they overlap thereby. The access code can be extracted from the answer signals by a special receiver.

15:50 Not true...  
While it is impossible in the Wood reference that several transponders answer at the same time, the invention of the instant application discloses transponders that do answer at the same time, as is recited in claim 1 and in the

specification on page 7, lines 15 through 22, and on page 15, line 25 through page 16, line 16. This method thereby achieves a shorter access code processing time.

It is therefore believed to be clear that the invention of the instant application is not anticipated by Wood, Jr. Claims 1, 4, 5, and 7 are, therefore, believed to be patentable over the art.

In item 3 on page 4 of the above-identified Office action, claims 8 and 10-17 have been rejected as being obvious over Wood, Jr. (U.S. Patent No. 6,104,333) in view of Barham, et al. (U.S. Patent No. 5,432,813) under 35 U.S.C. § 103.

Barham discloses a receiver which can process a received signal in parallel. For this purpose, an antenna 12, 13 is provided which receives a signal and feeds the same to a power divider 14. This power divider divides the signal to two mixers 19 and 21, which are each phase-shifted by  $90^\circ$ . The mixers themselves route the respective signal in series to a series-to-parallel converter in Fig. 4 or Fig. 5. Even though the received signals may contain spread sequence, Barham et al. does not disclose the simultaneous transmission of several code signals that are also received and processed simultaneously. On the contrary, it is disclosed that a signal is received and serially fed to a serial-to-parallel converter

so that the received signal can be processed in parallel. Wood, Jr. does not make up for the deficiency of Barham et al. Therefore, a combination of the two prior art references Barham et al. and Wood, Jr. thus does not provide any information towards the structure, as it is recited in claim 8 of the instant application. Claim 8 is, therefore, believed to be patentable over the art. Since claims 10-17 are ultimately dependent from claim 8, claims 10-17 are believed to be patentable as well.

In item 4 on page 4 of the above-identified Office action, claims 2 and 9 have been rejected as being obvious over Wood, Jr. (U.S. Patent No. 6,104,333) and Barham, et al. (U.S. Patent No. 5,432,813) in view of Anderson (U.S. Patent No. 4,868,915) under 35 U.S.C. § 103.

Anderson discloses a keyless entry system in which the generating means 170 energizes the interrogation coils 60 producing a magnetic field of a predefined frequency spectrum. This magnetic field is distributed throughout the interrogation zone 15, thus serving to activate any marker 100 entering the interrogation zone 15. Once a marker 100 enters the interrogation zone 15, the receiving coil 50 accepts the coded signal generated by the activated marker 100 and transmits the coded signal to the detecting means 120. The decoding means 140 then verifies the code by comparing a

predefined internal code with the detected code. Upon verification of parity, the actuating means 145 enables the entry system 150 to disengage the locking mechanism 130.

While Anderson does disclose the marker 100 being capable of allowing numerous codes to be represented, it does not disclose the transmission of those codes simultaneously. Furthermore, it is not an object of Anderson nor does it disclose a request signal being transmitted by a transceiver and as a response, the transmission of more than one marker simultaneously.

Claim 1 of the instant application (as previously explained above) claims a simple request signal being transmitted with which the transponders, which receive the signal, transmit their respective answer signal back *at the same time*. It is thus achieved that - when several transponders are in the receiving area - several answer signals are sent at the same time and they overlap thereby. The access code can be extracted from the answer signals by a special receiver. Neither Wood nor Barham make up for this deficiency of Anderson.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is,

therefore, believed to be patentable over the art. Dependent claim 2 is believed to be patentable as well because it is dependent from claim 1.

Claim 8 claims a transceiver unit having an interrogation signal transmitter for generating and transmitting an interrogation signal, and a receiver for receiving access code signals, said receiver having at least one section with a device for **parallel processing of a plurality of received access code signals** in accordance with specific spread sequences superimposed on the access code signals; a plurality of access code transmitters each having a receiving and activation unit for receiving the interrogation signal and for controlling an output of the respective access code signal, a memory for storing specific spread sequences to be superimposed on the access code, and a transmission stage including a processing unit for superimposing the specific spread sequences to the access code.

As discussed above, Anderson does not disclose parallel processing of a plurality of received access code signals. Neither Wood nor Barham make up for this deficiency of Anderson.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either



show or suggest the features of claim 8. Claim 8 is, therefore, believed to be patentable over the art. Dependent claim 9 is believed to be patentable as well because it is dependent on claim 8.

In item 5 on page 5 of the above-identified Office action, claim 3 has been rejected as being obvious over Wood, Jr. (U.S. Patent No. 6,104,333) in view of MacLellan (U.S. Patent No. 5,940,006) under 35 U.S.C. § 103(a).

MacLellan discloses a time multiplex (TDMA), a frequency multiplex (FDMA), or a mixture of both. Due to the fact that the invention of the instant application neither uses a time multiplex nor a frequency multiplex process, MacLellan has nothing to do with the object of the application. In the present invention, the spread signals are transmitted by each transponder at the same time so that the signals overlap. It is important that the signals overlap approximately simultaneously so that the access code can be extracted from the signals. The digital access code can be recognized in the overlapped signals, only if the digital access code is present exactly simultaneously. Naturally, this assumes that each transponder, which is assigned to an object, such as the motor vehicle, has the same access code. If one of the transponders in the proximity of the object answers with a different access code, the access code cannot be recognized due to the

overlapping with other access codes. In this case, access cannot be granted.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art. Dependent claim 3 is believed to be patentable as well because it is dependent from claim 1.

In item 6 on page 5 of the above-identified Office action, claims 6 and 19 has been rejected as being obvious over Wood, Jr. (U.S. Patent No. 6,104,333), MacLellan (U.S. Patent No. 5,940,006), and Barham (U.S. Patent No. 5,432,813) in view of Lanzl (6,353,406) under 35 U.S.C. § 103(a).

Lanzl discloses an interrogation system for transponders, wherein each transponder transmits an answer signal at certain time intervals, which are randomly determined. Contrary to the invention of the instant application (as previously discussed above) the Lanzl reference actively avoids the simultaneous transmission of the answer signal. Neither Wood, Jr., MacLellan, nor Barham teaches or suggests simultaneous transmission of an answer signal. Lanzl does not make up for this deficiency. Therefore, Claim 1 is, believed to be patentable over the art. Because claim 3 is ultimately

dependent on claim 1, claim 3 is believed to be patentable as well.

In item 7 on page 6 of the above-identified Office action, claim 18 has been rejected as being obvious over Wood, Jr. in view of Tu et al. (U.S. Patent No. 5,682,403) under 35 U.S.C. § 103(a).

Tu et al. discloses a cellular telephone system which operates with spread spectrum technology. Contrary to the invention of the instant application (as previously discussed above) the Tu et al. reference actively avoids the simultaneous transmission of the answer signal. In the telephone system of Tu et al., as is disclosed in MacLellan, the transmitters are not specifically activated in order to simultaneously transmit their signals. This is so because a time multiplex system is used therein.

Wood, Jr. does not teach or suggest simultaneous transmission of an answer signal. Tu et al. does not make up for this deficiency. Therefore, Claim 8 is believed to be patentable over the art. Because claim 18 is dependent from claim 8, claim 18 is believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-13 and 16-19 is solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Petition for extension is herewith made. The extension fee for response within a period of 1 month pursuant to Section 1.136(a) in the amount of \$110.00 in accordance with Section 1.17 is enclosed herewith.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



For Applicants

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